

C181 recording medium as the head is moved thereacross, the center pole piece having a single thin film coil wrapped therearound for magnetically energizing each of said gaps.

B2 ~~14~~ 14. (amended) The thin film magnetic recording head of claim ~~12~~ wherein said pole pieces [are aligned, and] overlie each other and the coil in an integrated thin film structure.

Cancel Claims 30 and 31 without prejudice.

Please amend Claim 32 as follows:

B3 18 ~~32~~ 32. (amended) The thin film magnetic recording head of claim [31] ~~58~~ wherein said preconditioning gap is wider than said write gap.

Cancel Claims 35-47 without prejudice.

Please amend Claims 48 and 50 as follows:

C181 ~~50~~ 48. (amended) In a thin film magnetic recording head having a [pancake] thin film magnetic coil, a first pole piece P₁ substantially underlying a first half of said magnetic coil, and a second pole piece P₂ substantially overlying the first half of said magnetic coil, the pole pieces P₁ and P₂ together defining a write gap, the improvement comprising an extension of the pole piece P₁ [that] which substantially underlies [substantially all] a second half of the magnetic coil, and a third pole piece P₃ that substantially overlies [a] the second half of the magnetic coil and the pole piece P₂, the pole pieces P₂ and P₃ together defining a preconditioning gap, said preconditioning gap being substantially aligned with said write gap for immediately traversing the same portion of a recording medium as said write gap as the head is moved thereacross, said magnetic coil energizing both of said gaps.

B5 10 ~~50~~ 50. (amended) The improved thin film magnetic recording head of claim ~~48~~ wherein the pole piece P₃ [P3] is magnetically coupled to the pole piece P₂ [P2] through a portion of [P1] the pole piece P₁.

Cancel Claim 51 without prejudice.

Please add new Claims 52-62 as follows:

B6 11 ~~52~~ 52. (new) A thin film magnetic recording head comprising first, second and third pole pieces having at least distal ends, said pole pieces substantially lying in first, second and third planes, respectively, the distal ends of said pole pieces together defining a pair of gaps, said gaps being aligned to

successively traverse the same portion of a recording medium as the head is moved thereacross, and a magnetic coil ^{simultaneously} for energizing both of said gaps, said magnetic coil being comprised of a plurality of windings, said windings being substantially aligned to be successively adjacent one another so that substantially all of said windings lie in a single plane and extend around a portion of one of said pole pieces.

12 ¹⁰³ 53. (new) The thin film magnetic recording head of claim ¹¹ 52 wherein the second pole piece is positioned between the first and third pole pieces.

13 ¹² 54. (new) The thin film magnetic recording head of claim ¹² 53 wherein the magnetic coil extends around a portion of the second pole piece.

14 ¹³ 55. (new) The thin film magnetic recording head of claim ¹³ 54 wherein the pair of gaps comprise a write gap and a preconditioning gap.

15 ¹⁴ 56. (new) The thin film magnetic recording head of claim ¹⁴ 55 wherein the second pole piece has an end thereof magnetically coupled to the first pole piece, and the third pole piece has an end thereof magnetically coupled to the second pole piece.

16 ¹⁵ 57. (new) The thin film magnetic recording head of claim ¹⁵ 56 wherein the third pole piece is magnetically coupled to the second pole piece through a portion of the first pole piece.

17 ¹⁶ 58. (new) The thin film magnetic recording head of claim ¹⁶ 57 wherein said coil is a thin film pancake coil.

21 ¹⁷ 59. (new) A thin film magnetic recording head having a pair of gaps formed between three pole pieces, said pair of gaps being aligned with one another to successively traverse the same portion of a recording medium as the head is moved thereacross, said pole pieces including a center pole piece substantially lying in a single plane, said center pole piece having a single thin film coil wrapped around a portion thereof for magnetically energizing both of said gaps, said thin film coil substantially lying in a single plane generally parallel to the plane of said center pole piece. ^{simultaneously}

22 ¹⁸ 60. (new) The recording head of claim ¹⁸ 59 wherein said pole pieces further include upper and lower pole pieces.

23
61. (new) The recording head of claim 60 wherein the center pole piece overlies a portion of said coil and is magnetically coupled to the lower pole piece through a center of said coil.

24 62. (new) The recording head of claim 61 wherein the upper pole piece is magnetically coupled to the center pole piece through a portion of the lower pole piece.

Remarks

Interview record OK 11-2-98
As a preliminary matter, Applicant thanks the Examiner for the comments and assistance he provided during the several recent telephone conversations between the Examiner and the undersigned. In an effort to reach a compromise with the Examiner, Applicant has further amended the pending claims, and hereby submits additional claims that clearly define the present invention over the prior art, as explained below. Before explaining the allowability of these claims, however, Applicant would like to note the obvious shortcomings of the final rejection set forth in Paper No. 7.

I. THE FINAL OFFICE ACTION FAILS TO MAKE A PRIMA FACIE CASE OF OBVIOUSNESS

The final Office Action of Paper No. 7 fails to make a prima facie case of obviousness with respect to Claims 11-17 and 48-50 for at least two significant reasons. First, the Office Action contends that the Jeffers reference (U.S. Patent No. 4,908,724) renders obvious the thin film magnetic recording head of the present invention, which can magnetically energize two gaps with only one thin film coil. This is despite the fact that the Jeffers reference clearly discloses and requires two coils, rather than one coil, for magnetically energizing two gaps. As shown in Figure 2 of Jeffers, a magnetic structure 22 is wrapped with a coil 32 and a coil 34. In fact, the Jeffers reference refers to "[t]he coils 32, 34" in plural form. See Jeffers at column 2, line 31. Conspicuously absent from the final rejection, however, is any mention of the coil 34. On the contrary, the rejection contends that Jeffers' center pole piece has "a single coil (32) wrapped therearound (i.e., on both sides thereof) for magnetically energizing each of the gaps." See page 3 of Paper No. 7. Thus, the Office Action appears to contend that the coil 32 and the coil 34 somehow constitute a single coil. This is simply incorrect. The fact that Jeffers' coils 32 and 34 are